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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**



IN RE APPLICATION OF:  
Kimio INOUE

GROUP: 1723

SERIAL NO: 09/767,885

EXAMINER: SORKING, D.

FILED: January 24, 2001

FOR: SCREW SET FOR EXTRUDER

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a Notice of Appeal.

The review is requested for the reason(s) stated on the attached sheet(s). No more than five (5) pages are provided.

I am the attorney or agent of record.

Respectfully Submitted,

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## **PRE-APPEAL BRIEF REQUEST FOR REVIEW**

### **Issues**

1. Does the kneader of Figs. 1-3 of U.S. patent 5,947,593 (Inoue et al) provide a screw segment having the same sectional shape as a rotor segment, except for the crest portions of the kneading blades?
2. Would it have been obvious for one skilled in the art to have modified the mid-bottom discharge in the kneader (Fig. 2B) of Inoue et al in view of the tip end extrusion opening of the kneader/extruder in Fig. 12 of Inoue et al?

### **Argument**

**Issue 1:** Claim 10 recites an extruder wherein a screw segment of a screw set has the same sectional shape as a rotor segment of the screw set, except for the crest portions of the kneading blades (see page 9, lines 8-9). Since the rotor and screw segments of the screw set are formed with the same sectional shape, except for the crest portions of the blades thereof, axially misaligned screws will not interfere with each other (see page 11, lines 7-12).

Fig. 3 of Inoue et al discloses a kneader having a screw set with screw segments 1a and rotor segments 1b. The screw segments 1a and rotor segments 1b have substantially different sectional shapes (see response filed September 25, 2002, paragraph bridging pp. 5-6). The screw segments 1a and rotor segments 1b thus do not teach the claimed invention.

The Examiner has therefore relied on the unremarkable fact that the rotor segment 1b has the same shape as *itself* (note that paragraph 2 of the Office Action relies on rotor segment “1b” as both the rotor segment and the screw segment), the



disclosure of different crest portions of the rotor segment 1b stemming from the different tip portions 7a, 7b and 7c.

Applicants have submitted first and second declarations of Dr. Kimio Inoue, the first named inventor of the applied U.S. patent 5,947,593, on August 1, 2003 and November 17, 2003, respectively. According to the Inoue declarations, “rotor segment” and “screw segment” are terms of art for structurally different elements, and one skilled in the art would not identify a rotor segment as a screw segment (Second Inoue declaration, paragraphs 6-11). Applicants respectfully submit that this is evidence that the plain meaning of “rotor segment” is different from the plain meaning of “screw segment,” and that this precludes interpretation of the rotor segment 1b of Inoue et al to be both a rotor segment and a screw segment. Thus the fact that the rotor segment 1b in Fig. 3 of Inoue et al has the same shape as itself has no bearing on the obviousness of the claims.

**Issue 2:** Claim 10 also recites an extruder wherein the extruder barrel has an extrusion opening at the axial end thereof. The *non-extruding* kneader in Fig. 2 of Inoue et al lacks an extrusion opening but instead has a mid-bottom opening, and so this represents a further difference as compared to the claimed extruder.

Fig. 12 of Inoue et al shows a kneader/*extruder* (col. 10, lines 50-53) with an extrusion opening at the axial end of the barrel (col. 11, lines 1-3). The Examiner deems that this suggests modifying the non-extruding kneader of Fig 2 to provide an extrusion opening at the axial end thereof. However, since this would convert the non-extruding kneader of Fig. 2 to a kneader/*extruder*, one skilled in the art would in this case also modify the screw sets of Fig. 2 according the screw sets of the kneader/*extruder* of Figs 11-15. It is evident from Fig. 11 of Inoue et al that the

sectional shape of the rotor segments 21b of the kneader/extruder is different from the sectional shape of a screw segment thereof (an exemplary sectional shape of a screw segment is seen in Fig. 3), and so any modification of the first embodiment of Inoue et al in view of the second embodiment which may have been obvious to one skilled in the art would not correspond to the claimed invention.